

WHAT IS CLAIMED IS:

1. An inkjet recording element comprising a porous image-receiving layer comprising a surface for receiving an image, the surface having
5 been modified by plasma treatment, wherein the porous image-receiving layer before plasma treatment contains at least about 40% elemental carbon at the surface.
2. The inkjet recording element of claim 1 wherein the porous
10 image-receiving layer comprises an open-cell voided polymeric film.
3. The inkjet recording element of claim 2 wherein the open-cell voided polymeric film is coextruded with a non-voided polymeric backing film.
- 15 4. The inkjet recording element of claim 2 wherein the open-cell polymeric film comprises polyester or polyolefin polymers or copolymers.
5. The inkjet recording element of claim 4 wherein the open-cell polymeric film comprises PET, polyethylene, polypropylene or copolymers
20 thereof.
6. The inkjet recording element of claim 1 wherein the porous image-receiving layer comprises a synthetic non-woven fibrous sheet optionally overlying a support layer.
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7. The inkjet recording element of claim 6 wherein the synthetic non-woven fibrous sheet is a spun polyolefin.
8. The inkjet recording element of claim 1 wherein the porous
30 image-receiving layer comprises a foamed film optionally overlying a support.

9. The inkjet recording element of claim 1 wherein the porous image-receiving layer comprises fusible organic beads overlaying a support.

10. The inkjet recording element of claim 9 wherein the fusible
5 organic beads comprise polyurethane, polyester, or acrylic polymer.

11. The inkjet recording element of claim 1 wherein the porous image-receiving layer is a fibrous sheet comprising nanofibers and/or microfibers.

10 12. The inkjet recording element of claim 1 wherein the porous image-receiving layer comprises a polymeric film filled with porous particles.

13. The inkjet recording element of claim 12 wherein the polymeric film comprises polyolefin and the porous particles comprise siliceous
15 particles.

14. The inkjet recording element of claim 12 wherein the polymeric film comprises a polyolefin or a polyester film filled with inorganic porous particles.

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15. The inkjet recording element of claim 1 wherein the porous image-receiving layer further comprises a mordant for providing pigment affinity for the porous image-receiving layer.

25 16. The inkjet recording element of claim 1 wherein the porous image-receiving layer has interconnecting voids.

17. The recording element of claim 1 wherein the porous image-receiving layer is above a support.

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18. The inkjet recording element of claim 17 wherein the support is a material selected from the group consisting of cellulosic paper, resin-coated paper, polyester, polyolefin, synthetic paper, and combinations thereof.

5 19. The inkjet recording system of claim 18 wherein the support comprises paper that is resin coated with a polyethylene layer on its back.

20. The inkjet recording system of claim 18, further comprising an antistat or anticurl layer below the support.

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21. The recording element of claim 17 further comprising at least one intermediate ink-permeable base layer between the support and the image-receiving layer.

15 22. The recording element of claim 21 wherein the base layer comprises a voiding agent to an extent less than about 30% to about 50% by volume of the base layer.

23. The recording element of claim 21 wherein the base layer
20 comprises a polyester.

24. The recording element of claim 21 wherein the support comprises paper laminated to a side of the base layer which does not have thereon the image-receiving layer.

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25. An inkjet printing process, comprising the steps of:

A) providing an inkjet printer that is responsive to digital data signals;

B) loading the printer with an inkjet recording element comprising
30 an inkjet recording element according to claim 1 above that has been subjected to plasma treatment of its imaging surface;

C) loading the printer with an inkjet ink composition; and

D) printing on the inkjet recording element using the inkjet ink composition in response to the digital data signals.

5 26. The inkjet printing process of claim 19 wherein the ink composition is a pigmented ink.

 27. A method of making an inkjet recording element, which method comprises:

10 (a) providing a sheet material comprising at least one inkjet recording element, in cut or uncut form, in which a top layer is an ink-permeable porous ink-receiving layer containing at least about 40% elemental carbon content; and

 (b) subjecting an upper surface of the ink-permeable porous ink-
15 receiving layer to plasma treatment.

 28. The method of claim 27 further comprising packaging a plurality of the plasma treated inkjet recording elements for distribution and sale to users of the inkjet recording elements for use in an inkjet printing process.

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